

AMERICAN FARMER.

RURAL ECONOMY, INTERNAL IMPROVEMENTS, PRICE CURRENT.

"O fortunatos nimium sua si bona norint
Agricolae." VIRG.

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AGRICULTURE.

From the London Farmer's Journal.

HOLKHAM GRAND ANNUAL SHEEP-SHEARING MEETING, &c.

It has been usual with us to look to this festival with the most pleasing anticipations, and to contemplate its approach with a keenness of delight and satisfaction, (we hope) in some degree apportioned to the greatness of its utility, and to the exemplary merits and hospitality of its honorable and enlightened founder. But we confess that, on this occasion, our pleasure was damped by the sufferings of those for whose benefit the meetings were established; we could expect to find but a thin assemblage, and those depressed in spirit, and bankrupts in hope, as thousands of their brethren are in fortune. These feelings were increased by the effects of a most ungenial season, which we feared must have an injurious effect upon the approaching harvest; for, however much the country may be injured by *abundance*, we apprehend much greater evils from scarcity. We are happy to say, that in this our fears are considerably alleviated by a view of the country: for though, on great breadths of poor land, the crops are good for very little, yet we find that where land is good, or where, though naturally mean, it is well farmed, the crops are pretty generally promising: barley is certainly the shortest in promise; and in low fens, and cold situations, oats are very bad. We need not add that the crops are very late; in the forwardest instances, the wheat and barley being only just bursting into ear.

FIRST DAY, (MONDAY.)

Contrary to our expectations, an unusually numerous and brilliant assemblage of Mr. Coke's private friends appeared on the lawn about ten o'clock, where a very interesting scene was prepared for their inspection: this consisted of about a dozen little girls with spinning wheels, (decorated with nosegays) and four or five with *Bundies* (for breaking the material) all busied in manufacturing the flax and hemp that grew last year in the park. One female, of an elder description, was employed in dressing the stuff, and specimens of sheeting, sacking, and yarn, (bleached and unbleached) were lying by them. The whole of this has been effected under the superintendence of Mr. Herod, who explained the particulars necessary to the information of the company: sacks ready made, very stout and good, could be afforded for 3s. each, and almost everlasting sheeting, at 1s. 6d. per yard. It is highly pleasing and delightful to consider how much better it must be to bring up the children of the cottagers to useful employment of this sort, than to leave them to barbarity and ignorance, to waste their valuable youthful days in unprofitable idleness, or mischievous sports; the most important school of youth is the school of well regulated industry.

From 10 to 11 o'clock we had the satisfaction to see a numerous field of horsemen arrive in the front of the Hall, by the several roads that lead through the park; at which time Mr. Coke mounted his faithful grey, and led his friends and visitors to the great barn, where the shearing was in progress, and several objects of exhibition were arranged. The first was a row of 15 stallions of various descriptions; blood horses; half bred, and those for harness and the plough. We are sorry to say that, in our judgment, the cart horses were not very good, and we fear that the county of Norfolk is not in the way much to im-

prove its breed of this sort of stock; certainly the more is Mr. Coke's merit and wisdom in offering premiums, and we hope to see a corresponding improvement in future. From there the company moved to the piggery, where was a very excellent show of boar pigs; of these, and the horses, we shall give lists at the end of this report, in which the premiums will be particularized. Several boars, as extra stock, were exhibited by Mr. Coke, and also four extraordinary fat hogs, about 15 months old, bred between the Neapolitan boar and the Suffolk sow; they were remarkably fat, and of great weight. The exhibition of implements was a short one, several which were expected not having arrived. Mr. John Hempton showed a drill roll, having several improved properties, not easily described; its price, which we understood to be about £35, makes us fear that few of them will be sold in these times. Mr. Torey exhibited a new patent drill, for fixing on a plough beam; it is a very ingenious yet simple machine, and receives its operating motion from the wheel on which the end of the beam rests; we are here again compelled to lament the price at which the machine is offered. Four guineas for a little box, about the size of a salt box, is an enormous charge, which the workmanship within, if it were as intricate as clock-work, could hardly justify. We beg to add, that implement makers, and handicrafts in general, must endeavour to work cheaper, if they expect in future to be paid: what may be the actual cost of making this drill, we do not know; but we apprehend that the patentee must wait the revival of agricultural prosperity before many of them can be used. The rolling harrow was again exhibited, and Mr. Coke informed the company, in the most conclusive and satisfactory manner, that it was proved to be a most useful and effectual implement. This we were very happy to hear; for we have too often experienced the difficulty of clearing the roots of couch from even a well broken tilth; the ordinary operations not bringing them sufficiently to the surface, without more repetitions of ploughing than are otherwise requisite or useful to the soil.

About one o'clock the cavalcade proceeded to Quarles and Egmore, viewing the admirable husbandry and excellent crops which were on either side presented: the only phraseology which is suitable by way of description, is to say that they were *as clean and as good as usual*. Mr. Denny's dairy of Devon cows was much admired, and Mr. Coke particularly called the attention of the company to Mr. Paul's mode of saving round stacks of wheat from vermin, by plastering round the bottom. We have formerly slightly noticed this matter, which may be here more particularly described, because it is a mode easily practised. The stack being widened a little from the bottom, is to be closely paired about 2½ feet high; and a mortar, prepared with well tempered clay or sand, and a little lime, is plastered on the pared part, joining the floor, and brought to a smooth surface with the trowel. It sticks in the same manner as it would on a reeded partition, and vermin cannot climb it. Some very fine inoculated pasture was viewed; and some pasturage, on the like soil, from *sowed grasses*, was finely contrasted therewith. We have heretofore been sufficiently copious in explaining this process, and the true reason of its great success on soils not by nature adapted to good permanent grass: that is, that with the roots transplanted, the very soil goes with them in which they are growing already: with this old and mellow earth, perennial life and vigor are moved with the herbage, and transferred to the other field, and you acquire in two years, a sward that it would otherwise take from 20 to 5 years to establish.

The company then passed over to Mr. Hill's farm at Waterden, where they were shown two excellent fields of a variety of wheat, recently introduced into the neighbourhood of Holkham, called *Creeping wheat*, which name is adopted from the quality the wheat possesses of *tillering* more than any other sort. It is a tall-growing variety, and resembles Talavera in some particulars: it differs, however, in two respects; first, that it is quite a red wheat; and second, late in ripening: the crops of it were very excellent and promising. Returning to the Hall, the company were gratified with the sight of several herds of young Devon cattle, which were remarkably beautiful, and in fine condition.

THE DINNER.

About half past three o'clock the company sat down to dinner, in number about 300. The cloth being drawn, Mr. Coke rose, and addressed some observations to the company, arising out of the times and the occasion. He began by thanking the company for their attendance, congratulating himself on the happiness he felt in seeing so numerous a meeting of Noblemen and Gentlemen, and especially on the honor he enjoyed in the company of the Royal Duke on his left hand: indeed, so great and respectable a meeting he had never witnessed, and among them so many distinguished characters, to whose exertions the country was so much indebted. (*Applause.*) "This meeting (continued Mr. Coke) has existed many years; it was established for the improvement of agriculture, principally, indeed, with a view to the agriculture of Norfolk; but it has extended its influence, I hope, much further, and further than I could ever have hoped or expected. It must be remembered by many here, and by all who have been here, that its purport was what I have stated; and that I have always cautioned my friends against mixing politics with the subjects to which our attention was properly directed, and for which we annually met together. But, gentlemen, I say it now, and with grief I advert to the cause, that this forbearance is at an end. I can no longer attempt to suppress the accents of that deep suffering into which the country is plunged, nor to stop in this place the expression of those complaints which have been heard with so little avail elsewhere. (*Great Applause.*) The country is now brought into such a condition that something must be allowed to that deep affliction with which we are visited, and from which, to look forward, the prospect is one of interminable misery and ruin, without a change of that system which has brought us to our present state. With regard to the efforts made by the agriculturists, and the plan suggested by their petitions, it is well known that I never anticipated any benefit; with this view, as soon as the committee was voted, I went to Mr. Gooch, thinking he might probably put me down. I begged if he had done so, that he would take my name out, as I could not serve on a Committee which were powerless to do good, even if their intentions were sincere. Mr. Gooch gratified me exceedingly, by saying, that he could require but one member for Norfolk, and he had put down my colleague; whom I considered much better adapted to the duties of such a Committee." Mr. Coke then, in his accustomed manner, stated his wish to accommodate every one on the occasion, and hoped that if any neglect was felt or surmised by any one, it must be entirely unintentional, and such might sometimes occur notwithstanding all his efforts, and those of Mr. Blaikie, who was so extremely active and anxious to prevent it. He repeated that every thing in his power was done that could be done by himself, assisted by Mr. Blaikie and his housekeeper.

Mr. Coke ended by giving the toast, as usual, "Constitution and King." The next toast was "The Queen," which was received with a burst of applause, which was several times repeated. Mr. Coke then, with an appropriate eulogium, gave the health of "His Royal Highness the Duke of Sussex," which was received and drank with loud acclamations, which were continued a long time. When his Royal Highness rose to return thanks, the applause was renewed with still greater enthusiasm.

His Royal Highness spoke to the following effect:—"Gentlemen, I beg leave to express my sincere thanks for the very handsome and kind manner in which my health has been drank, and I may add, in which it has always been received in this county. Wherever independent yeomen are, there I am proud to be; and the testimonies of their regard are ever more dear to my heart. I have but little knowledge in agriculture; but I know something of men, and I value the first for their integrity. In the yeomanry of Norfolk, in the yeomanry of England, I recognise a race of men most worthy of esteem, and dear to my affections; I may add most worthy of support, for they are the sinews and strength of the kingdom. I hope I have just notions on this subject, as it is my pride to belong to a family which has been called to the Crown of this kingdom by the love and free choice of such men; it is my pride to be a member of that family, of which all the members, I am sure, are sensible of the value of such a race, and of the love and homage of honest and independent hearts. I say, Gentlemen, that I understand little of agriculture; but there is one part I understand, and that is the attachment which ought to subsist between the owner and renter of the land: if I have missed learning other parts here, yet here I have learned that at least, by the most practical and effectual lesson that is to be any where found; and, indeed, it puts me in mind, that all solid and useful attachment must be founded on mutual good understanding, good-will, and reciprocal benefits. There is a sentiment, Gentlemen, that does honour to every landlord, and which is frequently uttered in this house—which is, "Live and let live;" it implies an union of moral obligation, which is, indeed, but another way of expressing that Christian principle, *To do as we would be done by*: this takes in a large field indeed, because no situation in life, no sphere of action is removed from its obvious import, nor exempted from its binding force. I cannot help here thinking of the sufferings referred to by my kind host at the head of the table, but I do not think myself qualified to speak of them: that they were relieved must be the ardent wish of every man who can think, feel, or comprehend: that the complaints are uttered without cause, or without urgent cause, it is impossible to believe; therefore, that they should be remedied, is necessary and indispensable. Now, I do not presume to say; but still I think there is stuff enough in us to weather the storm, if it be but sincerely applied and rightly directed: that such may be the case, is the warmest wish of my heart, as it is essential to the existence of that prosperity which is for the safety, honour, and happiness of the kingdom, and due to that most numerous and meritorious race of people whose worth is equal to their sufferings, which admit, I hope, of cure, but scarcely of augmentation. I congratulate them on the perfect and entire impression that has been made to this effect; and I congratulate myself in being here to witness, in the owner of this house, the attachment and gratitude of such people, which is certainly the proudest distinction of an English gentleman. For my part, if ever I should be in danger of forgetting the sentiments which I have hitherto always felt, and frequently uttered, I should think it my duty to come to Norfolk to take lessons on that subject. Gentlemen, I beg once more to return my thanks for the marks of attachment which you have been pleased to bestow on me. I must say they are unbought, for I am sure I have done you individually no service. I fear they are undeserved, for my desire to merit them is much greater than my power or my performance. But such is my satisfaction in receiving these testimonies, that it exalts

me in my own esteem, and almost persuades me that I merit your love as much as I am proud of it." His Royal Highness sat down amidst the unbounded acclamations of the company.—And as it would be a bad taste to interlard a speech so affectionate, and delivered with such ease and dignified energy, with making the applause which accompanied its sentiments, so we leave it to our readers to conceive (which is not difficult) where, and how much the several parts were applauded.

Mr. Coke rose, on the intimation of such a prompter, and gave "Live and let live," which was drank with great applause.

His Royal Highness then rose, and said,—It need not be observed that the sentiment put him, and all the company, in mind of the man. In hearing such a wise, liberal, and humane sentiment, it naturally put them in mind of the person who gave it. His Royal Highness then pronounced a most admirable and judicious eulogium upon the worth of such a character, and the tendency of his precepts and his conduct to promote the most useful effects in industry and morals; where the happiness and prosperity, the comfort and independence of a tenantry and people were the prime objects of those under whose influence they were fostered, there the affections were unfolded, and all the good feelings of the heart were brought in aid of moral obligation. Where industry prospered, and was duly encouraged, the picture of humanity was delightful: were the plough was honoured before the spear, and where instead of swords we used sickles, it was a state of society not only good for this country, but for the world at large; and it was a sentiment which could not but be reciprocated by the foreigners who attend the meeting, and would go a great way (and this was one of the best effects of it) to harmonize the mutual good will of nations, and disarm at once their prejudices and their animosity. "Among others, I notice here (said his Royal Highness) an American gentleman, and it gives me an opportunity to remark, that as President of the Society of Arts, I have frequently met with some of the most useful and ingenious inventions, as coming from the people of that country, and have frequently given medals which was due to their merit. This I say with the more pleasure, because it is a sentiment the most grateful to my feelings, to encourage that friendship and good-will between this country and that, which is to the honour as well as the interest of both. I will now give the health of Mr. Coke, with honour, prosperity, and long life:—that he may continue to add to the good he has produced by these meetings, and by his virtuous and amiable conduct wherever the sphere of his influence (which is not small) extends. May he long enjoy that happiness which only such worth can bestow; and, in the end, arrive at that which we all hope for, but which only such virtues can ensure."—The toast was received and drank, after this solemn invocation, with more than the usual tokens of reverence and attachment.

Mr. Coke returned thanks in the most feeling manner, but very succinctly, as on these occasions his good taste always dictates. He then proceeded to address the company on the agricultural state of the country, and the ruined condition of the landed and farming interests, declaring that he was almost heart-broken at the consequences which he witnessed, and which he was sorry to say there was no attempts to mitigate, and which there did not appear to be any disposition to relieve. "I have said, Gentlemen, (continued Mr. Coke,) that this is not the place to talk on political subjects; that I have always felt the propriety of this forbearance, but that this duty is at an end, and I now throw it from me as an useless, pernicious flattery, to the system that destroys us. The time is come when we must speak—for to hold our tongue is impossible; to submit, and to suffer in silence, is to invite ruin, and to welcome the tortures which it is no heroism to bear,—but grief only, mingled neither with the pride of our nature, nor the consolation of our duty. The state into which we have long been advancing, it is well known that I have done my utmost to avert: the gradual encroachments of corruption, I have viewed with shame and sorrow

—with shame for my country, and sorrow for its people; but with indignation for myself, and with certain foreknowledge of its eventual effects. The consummation has now arrived; the end has come, so often predicted, and the ruin has overtaken us; to avert which no warnings were believed,—no admonitions listened to. Even now, what steps are taken, or what efforts are made to meet this tide of disaster, or stem the torrent that overwhelms us? Let me not copy the fallacious and evasive conduct which I see practised by those who ought to remedy these evils; let me not deceive you gentlemen, with stating palliatives and delusive hopes, which cannot, I am sure, for one moment be believed even by the simplicity and ingenuousness of youth itself. No, rather I will say, that dire taxation which grinds us to the dust, has been made the engine to despoil us at once of liberty and subsistence: so long as that continues our sufferings can never end; all other modes of remedying our evils, or enabling us to support them, are utterly without hope; they but prolong our torture, and suspend us in miserable and fruitless expectation. But the time is pressing, and I see around me Gentlemen who are much better qualified to speak to this point; let me advert, however, for a moment to the Report of the Committee who were appointed to consider and inquire into the agricultural distresses: that report was purposely delayed, and has been artfully and ingeniously drawn up to deceive those to whose benefit it purported to be directed; it is plain that nothing can arise out of it, and that precisely because nothing was intended; so after years of planning and waiting, and hoping and being deceived, we have been progressing in ruin and suffering, which is only the more irremediable. Well then, we can no longer conceal our feelings; it is time to speak, and speak plain, that we may be roused at least to a sense of our situation, and be conscious to what it is that we owe our misfortunes."—Mr. Coke here evidently spoke under very painful feelings, and after a momentary pause, hastened to introduce the toast he was about to propose, by adverting to the husbandry of Kent. That county, he said, had been called the garden of England; whether the epithet was complimentary or not, he did not know; but they certainly grew abundant of gooseberries and nuts, and sent them to the London market, so that so far the county was literally a garden (laughter). He could not envy the county of Kent such a distinction; but by way of contrast he would call Norfolk the granary of England, which some might think a greater praise. He then adverted to the excellent talents and character of the Member for Kent, Mr. Honeywood, whose health he was about to propose, but recalled for a moment the former subject, and said, he could not omit to mention the repeal of the Agricultural Horse Tax; he was sorry that Mr. Curwen (of whose talents and public services he thought very highly) should be weak enough to compliment Ministers with granting a boon to the country in the repeal of this tax; it was a boon bestowed, not by Ministers, but by the reviving good sense of Parliament, and particularly by the conviction of the landed interest, that they had all along been sacrificed without moderation and without mercy. The tax was forced from Ministers by a power with which it is impossible even for them to contend, and which is now, I hope, likely to be effectually roused to a sense of their own danger. By the procedure, and this only, will the Ministry be forced to turn round and undo what they have been so long doing, if it be yet in their power. "Mr. Honeywood," with three times three, which was drank with great applause.

[To be continued.]

Sketches on Practical Agriculture.

BY JOSHUA TYSON.

(Continued from page 220, vol. 3.)

Of Turnips.—I have generally been successful in raising this crop, but have seldom raised many, but with a view of improving, at the same

time, the meadow grounds. The ground should be broken up early in the spring and limed, from thirty to thirty-five bushels per acre, and twice fallow ploughed by the first day of August, so as to have the sod rotted and the ground completely ameliorated; and then put on from fifteen to twenty cart loads of well rotted dung per acre. The dung should be ploughed in very shallow. This last operation of ploughing should be done between the 10th and 15th of August. Three half gills of turnip seed, one of radish seed, and four quarts of timothy seed, well mixed together, I have found a sufficient quantity of seed per acre: just before the seed is sown the ground should be smoothly harrowed. The seed should be brushed in with what I call a brush harrow, prepared in this manner—take a pole ten or fifteen feet long, about the size of a common rail, and to it tie, or withe, at suitable distances, branches cut from the trees, so as to make a pretty broad and compact brush; on the top of this tie another pole of the same length, so as to keep the different branches in their proper places: with this go carefully over the ground, and it will most completely cover the seed and leave the surface fine and smooth. When the turnips are just up, mix plaster and wood ashes together, and sow it over the ground, one bushel of plaster and three or four of ashes per acre. This last act, I consider of use in preventing the destruction so frequently committed by the fly, as well as in affording proper nourishment for the young plants. When the above process throughout has been carefully attended to, I have never yet failed of having a good crop of turnips, and the succeeding season a great crop of timothy hay. The crop of turnips and timothy has always been much more valuable than the best crop of wheat; and the time, labour, and manure, no more than following for a crop of wheat. All the English writers on agriculture that I have read, (which by-the-by has not been very many) extol the value and virtue of the turnip in feeding cattle and sheep, far beyond any thing my experience has met with; and yet I think them of more value than farmers in this country allow them to be; and well worth the attention of cultivators. Turnips cut small and mixed with Indian meal, are excellent food for store sheep, and particularly good for ewes that have lambs. I have never discovered any great fattening quality in turnips; they are, however, mixed with Indian meal as above, excellent food for cows that give milk. The soil and climate of England being moist and cool, certainly is more congenial to the growth of this plant than any of our middle or southern states, and I have not a doubt the English contains more nutriment than the American turnip.

The Ruta Baga, or Russian Turnip, after all Cobbett's puffing and blowing, I do not believe will be introduced into this country with any great success: our seasons are too short, hot and dry, to favour its growth. I have sown the ruta-baga with our common turnip: the common turnip was four fold the best crop. From this small experiment I do not draw my conclusions against the success of the Russian turnip, but from various other sources; an ex-

planation of which would require more time than I have at present to bestow on the subject.

Of Cabbage.—Cabbage, from the experience that I have had, I am induced to believe, deserves more attention from the agriculturist, than has hitherto been given it. It most certainly is, in the fall and winter seasons, an excellent food for milch cows, store hogs, and sheep. I have raised at the rate of from twelve to thirteen tons per acre: but the English writers say they can raise from twenty-five to thirty tons per acre. I wish to make some more actual experiments of the growth and value of this vegetable, so as to enable me to speak with more precision.

Of the Mangel Wurtzel, or large beet, I have had some experience, and think them excellent food for cows and sheep, and well worth more particular attention.

Of the Parsnip.—I think this one of the most nutritious roots that grows, next to the potato, and, indeed, if fed raw to cows, certainly preferable. I wish to make some further experiments of the value and virtue of this root.

Of Horses.—The farmer ought not to pay as much attention to the elegance of his horses, as to their strength and durability. An elegant horse worth one hundred and fifty dollars, will not perform more actual service to the farmer, than one that would cost but sixty or eighty dollars. Many farmers, through pride, (I know not what else to call it) have more capital employed in this way than is necessary; and at the same time not money enough to purchase cattle and stock of other kinds, to proportion their farms to the best advantage. The manner of feeding and working horses are subjects of much interest to the farmer; a headlong, ignorant fellow, will waste more grain in feeding the horses, than all his services are worth. This is too frequently the case. It becomes, therefore, highly the interest and duty of the farmer to pay attention to these subjects.

My manner of feeding horses in the winter season has generally been this:—I have them mugged in the morning of each day with cut oats from the sheaf, with about two quarts of meal of rye or oats and Indian corn ground together, for each horse; this, with a moderate proportion of hay, will keep horses that are not at work in most excellent order. This plan I think as cheap as feeding hay only, and much preferable. The horses ought to be curried once a day, the stables kept clean and well littered. In working of horses great care ought to be taken not to overload, or to drive too fast. There is a foolish pride or ambition with most of those men we employ to manage our horses, on the farm, or in the team, of overloading, whipping, and straining every nerve of the poor animals; and then vainly boasting of the strength of the injured brutes. This kind of conduct is very reprehensible, and little less cruel than the infamous Inquisition of St. Bernard.

Of Work Cattle.—It certainly is a mistaken notion with most of our farmers, that they do not use more oxen to perform the drudgery on their farms, and less number of horses. A yoke of good tractable oxen, I am confident, may be a saving of fifty dollars a year to the farmer.

Of Stall-feeding Cattle.—After the month of July, as soon as convenience will permit, purchase what cattle you intend for the stalls, or winter feeding; be careful to select handsome, thrifty bullocks, between the ages of six and eight years old. Let them run to pasture as long as there is sufficient grass to keep them in a thriving state. After the season of pasturing is past, they should be put into the stalls, fed with good hay, and each ox about six quarts of short feed, composed of equal quantities of oats or shorts and corn, per day: this should be given to the cattle dry, three quarts in the morning and three in the evening. The stable should be well littered and cleaned, at least twice a week. After the 1st of January, the quantity of short feed should be increased to eight quarts for each ox, per day, and fed on the best hay. If any of the cattle should not appear to thrive equal with the rest, a few quarts of potatoes, given in addition to the usual quantity of food, has a very good effect. In this month or beginning of February, the cattle will begin to cast their coats; this may be facilitated by mixing a small quantity of flax seed among their feed, or having it ground among their feed. From this time the cattle should be curried and cleaned at least every other day. Great care should be taken not to stall them, at any time, with their food, for if this happens, it generally requires a considerable time before they gain their usual appetite. They should be turned out of their stalls for five or six hours every day, to give them an opportunity to get drink, and stretch their limbs. If your cattle do not appear to thrive as fast as you could wish, you may increase the quantity of short feed to ten quarts per day, if they eat it with good appetite. With this course of management, regularly and attentively pursued, your cattle will be fit for the market by the first of April.

Of Summer feeding Cattle.—In the month of November or beginning of December, just as convenience and circumstances best permit, buy as many young bullocks, from three to six years of age, as you have straw, stocks, and rough hay, to carry through the winter. In the spring they should be fed before going to grass, on pretty good hay, for a month or more. If you have any rough meadow bottoms, get the cattle to pasture as early as possible. As soon in the month of May as your clover pasture will afford a good supply of grass, the cattle should be turned in. Be careful to salt your cattle twice or three times a week. Reserve your best pasture fields until the month of June. After your first crop of hay is cut, be careful to change the cattle pretty often from field to field; the changing is of much use, for they seem to feed and thrive better by this mode than if they are kept long on the same field. If your pasture has been good, some of your bullocks will be fit for the butcher in the month of July. As fast as they are fattened sell them off, and replace them with a second stock; but by all means be careful not to overstock. It is of great injury to your pasture fields to be eaten down very low.

(To be continued.)

For the American Farmer.

"A calender, a calender! look in the almanack;
find out moonshine, find out moonshine."

SHAKESPEARE.

Meridian Hill, October 9th, 1821.

SIR—It is not my purpose now to occupy much of your time, or your paper. I shall be as brief as circumstances will allow. I have advanced opinions founded more on the experience of others, than on that of my own, as to the influence of the moon on Vegetation—these opinions have not only been doubted, but have been considered "visionary", and founded on prejudice which ought to exist no longer in this country. Nay some go so far as to assert, that because an influence is ascribed to the moon, none other but a "malignant" influence is meant!

Having expressed my belief in this lunar influence, I owe it to myself and to the public, that I should shew on what it is founded; and I hope to convince your readers that the opinion is not taken up lightly—nor is it without good foundation. Let it be clearly understood, however, at the outset, that all I mean to prove is the existence of an influence—the nature of this influence, whether beneficial or malignant—and (if either or both) the particular period at which it is exercised with most effect, I leave to others. My object is only to prove that the opinion of this influence, sanctioned by the most learned of all ages, is entitled to some consideration; for I have no where asserted, that the beneficial or deleterious influence is confined to either the full or the dark of the moon; and whatever influence on the sap, I have ascribed to attraction, was considered relatively to its influence on the tides, and was limited to the periods of that influence.

As regards the influence of the moon on animal creation, I have but a word to say—the subject is a delicate one for investigation; but I have been informed by physicians, and others better qualified than even physicians to decide, that our own species are under the influence of the moon, and that this influence manifests itself in a manner, to put the thing beyond all doubt. The very term applied to the evidence of this influence is the "proof" of the opinion of medical men, to which an appeal has been made by one of your correspondents. It also may be a prejudice—if so, it is one sanctioned by great antiquity, and by the opinion, not only of those affected by that influence, but of most medical men. Old opinions like old adages, are valuable for standing the test of time; and there are none which have come down to us through a longer line of years, than the opinion of this lunar influence.

But laying aside ancient opinions; abandoning altogether established prejudices, and depending upon what is familiar to every man, woman and child in the community, I will pledge myself to prove that the moon, if you will only allow it affords light, has an influence, and a powerful influence too, on vegetation.

Whether "root of Hemlock, digg'd 'i the dark," is more poisonous than if dug in the light, is little to the purpose, if I prove that light, or the absence of light, produces the slightest change in any vegetable production whatever, my purpose is effected. Nature acting as I have somewhere before said, using the words of the Poet, by "general and not by partial laws"—and this remark will as well apply to the animal as to the vegetable creation, in reference to lunar influence.

Among the first commands of the great origin of all things, before even order was created from chaos, was that there should be light; after which grass and herbs, yielding seed, and the trees yielding fruit according to their kind, were formed—the sun was commanded to rule by day, and the moon by night; and the prophet Isaiah, saith that "the light of the moon should be as the light of the sun." Light, then, from the earliest ages has been considered a quality or element, distinct from all others; acting independently, and exercising a direct influence on every thing. It acts in proportion to its quantity; and the sun, the great fountain of light, independent of heat,

exercises an influence on vegetation, that none can doubt.

Wherever his rays are excluded, vegetables assume a pallid, sickly appearance: and in time perish for want of that property whatever it is, which is imparted to them by their direct operation. Grass near the roots is less green than near the tops of the blades: the bleaching of Endive and Celery, by the exclusion of the rays of the sun, is familiar to every one, and all in the least degree conversant with horticulture, or agriculture, know well that the lively green of all vegetables is obtained by an exposure to, and absence of this verdure, is occasioned by screening them from the light. Temperature has nothing to do with it—for the same effect is made manifest in the heat of a stove room, as in the heat of a garden.

An exposure to the light, or a seclusion from it, alone, under all circumstances of vegetating heat, is sufficient to produce the effect; and whether the light proceed direct from the sun, or be borrowed from him by the moon, and reflected on the plant, the effect is the same; light is light, "and the light of the moon shall be as the light of sun." Nay, whether it be the light of the sun, of the moon, of a torch, or of a glow worm, provided it is in equal quantities, the effect on vegetables is the same.

This I am to prove by facts—a few shall suffice.

The heat of the sun cannot penetrate the snow; but its rays of light pass through it—under the snow the grass is green. Cover the grass with any opaque substance, through which the rays of light cannot penetrate, but through which the heat may pass, and the grass becomes a sickly yellow. Light, therefore, and not the heat of the sun, gives verdure to the grass.

A sensitive plant confined in a dark place, will close its leaves, but on illuminating the chamber with lamps, they will again expand. This experiment has often been made, and particularly by Decandole. Torch light, therefore, produces the same effect, as the light of the sun; and it is ascertained that all plants are under the same influence, that is, they hang and close their leaves when the light is absent, and expand them again when its rays have returned.

An ivy with the light shining on it, placed near a dark substance, will recede from the light, and will approach, and cling to the dark substance; whether this be a wall or a piece of black cloth or black paper; place it opposite to a mirror that shall reflect on it rays of light, and it will recede from the mirror—thus it appears that reflected light has the same effect on vegetables, as the rays of the sun. I will here remark that all plants and vegetables depending on themselves for support, incline toward the light; and those whose feebleness requires support, recede from it—hence the reason of their seeking opaque substances as if conscious of their own weakness. Whether this arises from the difference in the diameter of the stalk in the two cases, which enables the smaller plant to receive the light more equally on all sides, and subjects the other to a contraction of the side exposed to the light, which draws it out of its perpendicular line, I am unable to say, but this is certain, that all plants project the greater number of their limbs to the side affording the greatest light, and expose their leaves to receive it to the greatest advantage—And the tendrils of Vines vary their position at every period of the day, returning at night to occupy the same situation they had occupied in the morning. I would also notice the sun flower, but this might be called prejudice—light is their moving principle, and appears as necessary to their existence as air to the animal creation.

The antipathy, as it is called, of plants, is nothing more than a seeking of light. Place many poplars, or other trees in a circle, and the tops will incline outwards. If I mistake not this disposition, both of the vine and the tree, and the consequent disease of obscured limbs, is very perceptible in the yard, and at the back of the house of your next door neighbour.

Branches exposed to the light, are thereby enabled to attract to themselves a larger portion of the ascending sap, which they employ in leaves and vigorous annual shoots, while the shadowed branches become languid and unhealthy."

These facts are familiar to every one or may be made so; and it has been observed by a distinguished experimentalist, that "if the operation of light gives ability to the expanded branch to attract the ascending current of sap, it appears not improbable that the operation of proper food and moisture in the soil, upon the bark of the roots, may give ability to that organ, to attract and employ the descending current of sap." Sap, as I have before shewn, ascending by the inner or wood vessels, and descending by those of the bark.

Chymists account for the condition of plants exposed to, or screened from the light as follows:

"Plants exposed to the light, have been found to produce oxygen gas in an elastic medium, and in water containing no carbonic acid gas; but in quantities much smaller than when carbonic acid gas was present."

"In the dark no oxygen gas is produced by plants, whatever be the elastic medium to which they are exposed; and no carbonic acid absorbed. In most cases on the contrary, oxygen gas, if it be present, is absorbed and carbonic acid gas is produced."

"In the changes that take place in the composition of the organized parts, it is believed that saccharine compounds are formed principally during the absence of light; gum, woody fibre, oils, and resins during its presence—and the evolution of carbonic acid gas, or its formation during the absence of light, may be necessary to give greater solubility to certain compounds in the plant. "I once suspected" (says Sir Humphrey Davy) "that all the carbonic acid gas produced by plants in the night might be owing to the decay of some part of the leaf or epidermis; but the recent experiments of Doctor Ellis, are opposed to this idea; and I found that a perfectly healthy plant of celery, placed in a given portion of air for a few hours only, occasioned a production of carbonic acid gas, and an absorption of oxygen gas."

In one of my former communications I stated that chymistry could be brought forward in support of my opinion of lunar influence, or the influence of light on vegetation; and I resort to it now, to shew that the assertion was not made lightly, nor without good authority.

What is light? Lexicographers define it to be, that quality or action of the transparent medium by which we see. Bright, clear; not dark, tending to whiteness. The philosopher who had become blind in contemplating the sun, and who had exhausted all the methods which optics, chymistry and even necromancy can supply, to shut up one of his rays in a bottle, defined light to be *nothing at all*. "It is not a fluid, said he, for it cannot be agitated by the wind; it is not a solid, for the parts of it cannot be separated; it is not a fire, for it is not extinguishable in water; it is not a spirit, as it is visible; it is not a body, for we cannot handle it; it is not even a moving power, for it agitates not the slightest bodies; it is therefore (exclaims he) "nothing at all."

The Negro who knew that light proceeded equally from the sun and his lamp; and that the rising and setting of the one, was commencement and termination of his labours, and that the other supplied his absence—knew more of the practical utility of both, than his master—to him they were equally useful. The light of the sun, says the Negro, interests me less than that of this lamp, which he had made of the shell of a Cocoa nut, for without it I should not be able to serve you during the night. The Negro viewed it as a quality, which he could create at pleasure, and apply to his own convenience. To this quality Chymists ascribe certain properties; and I have shewn that, whether it be derived immediately from the sun, the source of light, or be borrowed therefrom by means of a reflector, be it a mirror or the moon—or obtained by artificial means, like the Negro's lamp, its properties are the same. Its operations are silent and constant—not tangible, yet perceptible—not susceptible of demonstration or explanation, and yet its influence is satisfactory to our minds.

Who can demonstrate why the magnet inclines to the pole? why it varies from it? why this variation is subject to an annual variation? We may calculate all these phenomena with tolerable precision—we may reason on them—but who can explain them? So

of the variation in the inclination of the Earth's axis. We know the fact and we are ignorant of the cause. Philosophy may reason on it, but human knowledge is confined within certain limits, and it is in vain for man to endeavour to transcend them.

"Aspiring to be Gods, if Angels fell,
"Aspiring to be Angels, men rebel."

It is scarcely necessary that I should make any further applications of what precedes, to the point at issue; the enquiry will naturally be, will the full light of the moon, or the absence thereof, produce an influence on plants? Will several weeks of constant light shining full on the vegetable kingdom, the sun ruling by day and the moon ruling by night; or will the absence of one of these luminaries, thereby leaving the plant in obscurity, have any effect on it?

Light it is agreed, is necessary for the existence of most plants, and without it they must perish.

The light of the sun shining for twelve hours in the four and twenty, gives health and verdure; the light of the moon for twelve hours more, must produce an effect proportioned to the amount of light supplied, and if the effect be healthful, the period of the decline of the moon for felling it, after the plant has enjoyed the full power of its light, must be the most favorable one to its durability.

The facts stated, would seem to confirm the opinion that when the leaves of vegetables, [called by some their lungs] perform their healthy functions, they tend to purify the atmosphere on the different variations and changes from light to darkness; and if so, there is another argument in favor of the influence which the moon exercises on animal creation, through the medium of the atmosphere, which must be more or less suited to respiration and health, in proportion to the greater or lesser quantity of oxygen it may contain.

I will close this communication with a quotation from my letter of the 10th of August last—and I make it to show that the remarks this letter contains are consistent with what I there advanced.

"Thus 'Vitruvius' method of felling timber in the 'winter season', is practised, and his recommendation to cut it 'on the decrease of the moon' is also worthy of attention. It is hard, however to persuade mankind that light, which cannot enter an opaque substance, can have an influence on trees. We should not, however, forget the innumerable experiments which have been made to prove, that it is to light they owe their verdure, and whatever may be the *modus operandi*; we cannot doubt, from daily experience, that light is as important as heat to the perfection of the vegetable world. Whether the presence or the absence of the moon, is most beneficial, is not the question—but only, what period of the moon is most proper for cutting timber."

With sincere esteem, your obedient servant,
D. PORTER.

J. S. Skinner, Esq.

The following communication is the result of a request for information about Davis's ploughs, made by "A SUBSCRIBER" dated Culpepper Court House, August 11th, 1821. Davis's Shovel ploughs have been much used by the Editor this summer and are much approved, as being well adapted to ploughing between drill crops and will answer equally well for Corn, Tobacco, &c.

[Editor Farmer.]

FOR THE AMERICAN FARMER.

The Horse and Plough.

Respected Friend John S. Skinner,

I trust thee will excuse my delay, in giving this communication, when informed that it was not through design, or neglect, but occasional, in order to obtain the most correct information I could get, relative to those subjects I had in view.

I apprehend there is no other subject, with which the husbandmen are so intimate, of which they have so imperfect a knowledge as that, of the strength of a Horse. From conversations I have had with different

men on that subject, I have reason to believe, that in common, the strength of the Horse is very much overrated. "General Beatson, an English author, a man of great practical knowledge relative to the art of husbandry, says, that Emerson affirms, that a man of ordinary strength can act a whole day against a resistance of thirty pounds. The strength of a horse is generally allowed to be equal to that of five or six men" so that about 165 pounds would be a proper draught for a horse. But where is the man that could believe this without much reflection or testing the fact; I confess I could not. Most men in estimating the strength of the horse calculate thus: that four horses are able to draw a wagon and as much load as will weigh 4000 pounds, of course each horse draws 1000 pounds; but just suppose the wagon was fixed on an inclined plain of 45 degrees elevation, then the plain would sustain half the weight, so that each horse has only 500 pounds to operate against, except as much more as might be necessary to overcome the friction and give motion. But the fact is that a horse cannot walk up an inclination of 45 degrees, much more draw up 500 pounds. Experience has taught me that it is very hard work for four horses to draw a wagon, and as much load as will weigh 4000 pounds up an inclination of 15 degrees, which is only the one sixth part of a perpendicular lift, of course each horse has but the one sixth part of 1000 pounds to operate against about 167 pounds and as much more as might be necessary to overcome the friction and give motion, which I suppose would bring the draught of each horse up to about 180 pounds, which from observations and testing the fact by an accurate instrument (called the Dynamometer) I know to be a heavy draught for a horse to operate against all day, and that it would be found rather more than what a horse of common size would be able to do. I believe that for a constant draught 150 pounds would be found enough for a good horse. I presume that when the husbandmen come to have a proper understanding of the strength of the animal power by which they are to propel their implements, in performing the various operations necessary, that they will then and not until then be persuaded to pay some attention to some valuable improvements that are made and making, which at present are but very little attended to.

Of all the implements used in cultivating the soil, the Plough is by far the most valuable, the most efficient and most expensive to operate with, of course needs the most attention in the selection. But different neighborhoods have their favorite ploughs, each hold theirs to be the best, and in many instances without being able to assign a reason why they prefer such a plough to another, only that they have got in the habit of using them—have become naturalized to them, and really believe them to be the best in the world or of course they would use some other, for it is a rule that men cannot alter, that so long as they are of the opinion that their implements are of the best kind, they are satisfied with them no matter how indifferent, but as soon as they become convinced that there is better, or that those they have might be improved, they become dissatisfied with them, no matter how well they may have answered the purpose. And to obtain a real good plough such as will run easy to the team, easy to the ploughman, and easy kept in repair, is a subject so desirable, not only to the owner or employer, but even to the ploughman though he be an hireling or a slave, that it seems to be a subject of much more than common interest, and yet many of the husbandmen pay so little attention to this subject, that they buy the first they find, or look after such as can be had for the smallest price.

With regard to the history of the plough, who it was that first made or introduced it, and where, it matters not at present, we know that latterly there has been many improvements made on the plough, and certainly there has been much pains taken to make it operate in the most perfect manner, but I apprehend there has not been due attention paid to one very important point, that is, the power necessary to propel it; the reason of this suggestion is, that from experience I have found that there is a very material difference in the draft. I have observed in the 3d volume

of the American Farmer, page 58, in an address delivered by R. Sullivan at a meeting of the Massachusetts Agricultural Society; he states the necessity of introducing ploughs and other implements superior to those now commonly used, and then goes on to say, "that it has been ascertained by an accurate instrument adapted to the purpose, that there is a difference in ploughs of the same size and weight in regard to the power required for the draft, amounting to from two to six hundred per cent. & that it is doubted whether the knowledge of such a difference or indeed any, is known generally to our husbandmen, or whether it has usually been considered in the purchase of the implement, that every farmer complains of the expense of labor, &c."

For upwards of twenty years past, I have been more or less engaged in ploughing, plough making, and endeavoring to improve the plough, and in effecting my operations I have endeavored to obtain a perfect understanding of the different forms and operations of the plough. Among those that have endeavored to improve the plough I perceive, that the principal aim has been to form the moulding part, so as to turn the furrow in the most perfect manner, for which purpose they have made the mould board of the curvilinear form, making it more or less a twist according to what their fancy might dictate, combining (as they say) the power of the wedge and the screw. It does seem very natural to be sure, that the face of the mould board should be made twisting, in order to operate or turn a furrow in the most perfect manner, but when realized it will be found that the idea is entirely incorrect. Perhaps the easiest and most familiar way of illustrating this subject, may be to propose to those who may feel themselves interested, just to open a book and take hold of one corner of a single leaf or any number of leaves with a disposition of turning it or them over, and observe what shape would come nearest fitting the underside; no doubt it will be found that a section of a cylinder of a proper radius will fit it exactly. By this simple process it may be seen at once, that there is no twist needed in the form of the mould board, yet I have found from experience that it is necessary to make the fore part rather concave, and the lower part behind rather convex, in order to make it work in the most perfect manner, that is to scour on all parts in the most exact manner—after having adopted this plan for the shape of the moulding part, together with several other improvements which I have made, and seeing them operate, I became satisfied that my ploughs worked much easier than any I had ever seen operate—many that had used them being of the same opinion—some said there was as much as fifty per cent. difference in the draft between them and those ploughs that are in common use in this part of the country, and much reputed by many. With a desire to know for myself, and to gratify others, I have been at some expense and much pains to ascertain the fact, in order to do which I procured a very accurate instrument adapted to the purpose, and a ten inch plough of each kind most celebrated in this part of the country, say one of the Peacock, one of Wood's patent, one of the Freeborn ploughs, and one of my own, all of which I had put in the best order I knew how, and after having tested them to my full satisfaction and even much to my astonishment, at finding the difference in the draft so much more than I expected; I then selected a suitable situation and submitted the process to a number of farmers and others who interested themselves, whose report is hereunto subjoined. There was a wheel fixed under the beam of each plough which regulated the depth exactly, and the width of the furrows was carefully laid off by actual measurement. The following is their certificate.

These are to Certify, that we the undersigned citizens of Montgomery county, state of Maryland, this day met on Bernard Gilpen's farm in said county, attended to, and carefully inspected, the drafts of the three following ploughs (tested by an accurate instrument adapted to the purpose called the Dynamometer) in cutting a furrow five inches deep and twelve wide. The result was as follows.

1st. A ten inch Peacock plough made by Matthew Murray of Hagerstown, Maryland, required a force of 333 pounds.

2d. Woods' patent (No. 2) a ten inch plough with cast iron edge, required a force of 380 pounds.

3d. A ten inch plough, improved and made by Gideon Davis of Georgetown, District of Columbia, required a force of 237½ pounds.

We are of the opinion that the above ploughs were good of their kinds, in good order and performed well. 9th month, 18th day, 1821.

Signed—Roger Brooke, David Frame, Ignatius Waters, Joseph De Laplane, Bernard Gilpen, Basil Brooke, William Thomas, George Janney, Whitson Canby, Edward Stabler, Jun. Joseph Canby, Even Gaither, Thomas L. Reese, James Farr, James Frame, Jonathan Milburn.

There was a number more present that were willing to sign the above, but it was deemed unnecessary.

It will be seen that the difference in the operation of the above ploughs is as follows: 1st. The Peacock plough operates about 14 per cent. easier than the Woods' patent or the Freeborn plough. 2d. The plough improved and made by G. Davis, operates about 40 per cent. easier than the Peacock, and 60 per cent. easier than the Woods' plough.

I have no doubt that this subject will excite as much attention from the agricultural part of the community into whose hands it may come, as any other that could be laid before them; and I presume that the result of these experiments will be questioned by almost every individual; yet I believe that very few, if any, will be more surprised at the result than I have been, though from my own observation I had become convinced that there was a material difference in the draught of the different kind of ploughs, and even such as are much reputed; but I had no expectation of finding half so much, though I had been told frequently by different men who had used my ploughs, (as will be seen) that there was as much as 50 per cent. difference in the operation of my ploughs and those in common use, yet I could not think it possible, but from the attention that I have lately given this subject, and the experiments I have made, I now have no doubt of the fact (and have no doubt but that the ploughs that I now make will operate more than 30 per cent. easier than those I formerly made, though they were, and are yet in very high repute to a considerable extent.)

The following extracts and certificates will serve to show the opinion of those who had used my improved plough.

February 14, 1821.

Friend Davis,

The two ploughs which I purchased of you in September last went into operation shortly after. I have thrown over nearly one hundred acres of land with them—they far surpass my most sanguine expectations. They have been tested in rough stony lands as well as in strong clover lands, and in both instances perform well. At first sight I expressed strong doubts that they would not stand the shocks that is to be met with in our rough country, but these doubts are put at rest not having lost a single point by breaking—they chafe less in clover or stubble lands than any plough I have ever tried, and I am convinced they run one third lighter than any plough I have ever had on my farm.

Yours Respectfully,

JOHN WAILES,
of Montgomery county, Md.

Perrywood, May 22, 1821.

Sir,

I have made an experiment with your improved barshare plough, and have no hesitation in giving it as my opinion that it is infinitely less draught than any other I have ever used, and particularly adapted to the preparation of land where there is much litter, such as stubble, &c.

I am sir yours,

CLEMENT BROOKE,
of Prince George's county, Md.

Mr. GIDEON DAVIS.

Forrest Lodge, 12th June, 1821.—(Extracted.)
ESTEEMED FRIEND,

I commenced the use of the barshare plough purchased of you early last fall, and was much pleased with its operation on light land, but on heavy land with tough sward, the slice was left a little too much on edge. This spring it has fallowed at least one hundred acres, and the more I use it the better I like it. For the last 15 years I have had ploughs from the best mechanics of Frederick, Brookville and Baltimore, and must say it is the best I ever had for strength, permanence, and operation. I have had also a sufficient trial of the Adjusting Shovel Plough purchased of you at the same time, and have no hesitation in saying it is an admirable plough for the culture of Maise and Tobacco.

Yours very respectfully,

CHARLES S. SMITH.

GIDEON DAVIS.

Springfield, Montgomery county, Md. Sept. 1, 1821.

These are to certify, that I have used one of Gideon Davis's improved ploughs—am much pleased with its performance—find it very easy kept in order, and am of the opinion that it runs fifty per cent. easier than those I have been in the habit of using. Also, that I have used one of his Adjusting Shovel Ploughs and am of the opinion that it is without exception the best implement I have ever used in the cultivation of summer crops, and well adapted for seeding.

SAMUEL BUSEY.

One advantage in using these ploughs is, that they will turn a wider furrow than the common ploughs do.

In stocking, my ploughs are put together without mortice or tennon but with iron screw bolts, and by those that use and see them they are said to be stronger, handsomer, and easier kept in repair than those in common use. I carry on the manufacturing of these ploughs of various sizes, together with the Adjusting Shovel Plough, Straw Cutters, &c. in Georgetown, District of Columbia, where orders will be gladly received and strictly attended to by

GIDEON DAVIS, Manufacturer.

9th month, 22d day, 1821.

* An alteration has now been made which renders it perfect.

SECOND REPORT OF THE COMMITTEE ON MANURES.—July meeting, 1819.

The Committee on Manures, in continuation of the report submitted to the Society in July last, having therein treated of three divisions of their subject, animal, vegetable, and compound manures, proceed to the consideration of the fourth division, fossil manures: and will conclude with some observations relative to the time and mode of application of manures, to the soil.

Your committee are not acquainted with any fossils to be found in this district, which in their natural state have been used as manures, but they are inclined to believe, that marle, or some earth resembling marle in its effects, may be found. It is believed we have neither gypsum or limestone, but at the same time proper searches have not been made. It is here recommended to offer a handsome premium for the discovery of any substances, which actual experiment may prove to be beneficial. A judicious mixture of soils of different qualities, would doubtless be of great service. A tenacious clay is opened by the application of sand, and a porous open soil, is improved by the addition of clay; but the labour of this admixture would be very great, and the fertility communicated to the soil, not equal to our ideas of

improvement by a system of manures. Gypsum may be procured at a high price, and some few experiments have been made with it, but they have not succeeded, though it is probable the plaster had lost most of its good qualities, from having been ground for a long time. But your committee know that it has produced no effect, when applied to young corn in the hill, or to young clover and grass on very poor stiff soil, neither was the soil benefitted for a succeeding crop, as sometimes occurs with this fossil. Notwithstanding these discouraging circumstances, such have been the advantages in other places, resulting from the use of gypsum, that your committee recommend to every member, to lose no opportunity of procuring a little of it, and apply it to various crops, in various ways. A thin layer of it, mixed in turn with a compost heap, especially where a great proportion of vegetable matter is used, would undoubtedly tend to break down the woody fibre, and reduce the mass more speedily to the state of good manure; and in all operations with gypsum it should be recollected, that it is now pretty well ascertained, that it is not in any great degree a manure of itself, but that the vitriolic acid, converting vegetable substances into manure, is the cause of its imparting fertility to soils; where there is no such vegetable substance, it must be useless. Until however, the wisdom of our Legislature, aided by the public spirit of our citizens, shall open our rivers or improve our roads, your committee despair of seeing gypsum generally used for agricultural purposes, even if its effects were as decidedly advantageous here, as they have been found to be in our sister states. They therefore proceed to bring to the notice of the society, another substance, which has the all important advantage of being in the greatest abundance, and which has lately been highly recommended by zealous and intelligent writers.

This substance is burnt clay. Sir John Sinclair, in a late work on agriculture, published only last year, informs us that he found the first account of clay ashes, in an agricultural work, published in the year 1732, so that it is an old practice lately revived, and which has been highly recommended by the most voluminous writer of the age, Mr. William Cobbett, who, from his own experience, recommends it in the strongest manner for his Russian Turnip. The author of the "Complete Grazier" also gives an account of clay ashes, and says that poor worn soils, which, with manure, would only produce rye, with ten or twelve loads of clay ashes, have produced abundant and luxuriant crops. Mr. L'Hommiedieu also recommends clay ashes to the New York Society for the Promotion of Agriculture, as the cheapest manure that can be procured; and lastly, Dr. Mease, in a letter to the Philadelphia Agricultural Society, published last year, collects and cites many authorities, tending to prove the usefulness and cheapness of clay ashes, as a manure. The weight and respectability of these authorities, have decided your committee to commence some experiments on this subject, as soon as our harvest is secured, and to recommend to their brother farmers to multiply the chances of success, by burning clay into ashes themselves.

Although your committee do not understand the precise mode in which burnt clay fertilizes the soil, further than by opening and pulverizing it; yet the results of combustion, are, in many cases, so little known, that they will not suffer their ignorance of the *modus operandi*, to check their endeavors to obtain useful and practical knowledge; and they are the more incited to spare no exertions on this subject, from the conviction, that if the clay ashes do really fertilize a stiff, worn soil, they will furnish the great desideratum of our farmers, namely, a sufficiency of manure. For not only are the materials, clay and wood every where at hand, but it is believed the labor of preparing the ashes for the soil is less than in any other mode of procuring manure in any quantity. Your committee will now proceed to detail the mode they would recommend for obtaining the largest quantity of these ashes, with the least labor.

On some clay ridge most convenient to the field intended to be manured, dig a hole one foot deep, and from ten to fifteen feet square. Small kilns are recommended to begin with, as experience will suggest remedies for defects. Place the excavated clay round the sides of this shallow pit, and in the centre of it construct a small square pen, four or five feet high, and nearly a foot square, with small kindling wood, similar to the top of a common clay chimney; then cut a cord of wood four feet long, and lay the sticks crossing each other, over the bottom of the pit; having previously made a channel from the bottom of the small square, to the outside, by laying two stout sticks, eight or ten inches apart, on the ground, and covering them with flat rock or turf sods, to communicate a current of air to the centre and keep up the fire. This channel will not be needed after the kiln is once fairly on fire; then cover over the whole surface of your kiln with turf sods from the locks of your fence, and throw on the clay you have excavated, and dug from about it, covering the sods two or three feet with it; then set fire to your kiln, and cover the top of your small square pen with brush and sods, to exclude external air, which should only be admitted from the channel outside. It is there to be treated like a coal kiln. As the clay burns, more is to be thrown on in the places most burnt; and as the clay will burn of itself, you must supply more till you have enough for your purpose. The only precaution necessary is, not to let the fire break out, till you have enough burnt, and this may involve the necessity of watching it at night. As soon as the ashes are cool, they are fit for use, and should be spread on the land, and lightly ploughed or harrowed in, where it is said they will have an astonishing effect in producing prodigious crops of grass, grain, or any vegetable.

Your committee will conclude this part of their subject, by stating distinctly, that the information here given is derivative, and their authorities have been cited. They are sorry that their own experience furnishes nothing on the subject, but they will add, they are sanguine as to the result, and hopes that the members of this society will zealously unite in the determination practically to prove the utility of clay ashes on grain and turnips.

The application of manures to the soil, which is the remaining subject of discussion, should vary according to the nature both of the manure, the soil, and the crop which is first to be benefited by it. All ameliorating mixtures of soil may be made at the most convenient season, but the application of manure must be considered, both as to the state of the manure itself, (which involves the controversy between hot and short muck farmers,) and as to the state or preparation of the land, for a crop, or during its growth. With regard to the state of the manure at the time of application, justly celebrated farmers have given opinions diametrically opposite; and yet your committee are bold enough to disagree with both opinions considered as exclusive, and to say that both fermented and unfermented manures are proper at different times, and for different crops. For instance, your committee would not recommend the immediate application of hot stable manure, to a crop of wheat, though they would have no objection to a corn or pea crop; and the reason is obvious: Not only might hot stable manure produce diseases in a wheat crop, but it would probably introduce the seeds of weeds, which would have an opportunity of again seeding themselves and polluting your land, before your broadcast crop is off; but in a corn crop we should not fear these unhappy consequences, because our corn is a stout and vigorous plant, requiring strong manures; and as it is always a drill crop, the young weeds which might be introduced with the unfermented manure, would be destroyed in the necessary culture of the crop. These instances will enable the society to decide for themselves, when fermented or unfermented manures should be used. Well fermented manures and composts should in general be applied for broadcast crops, except perhaps barley; and hot muck may in this country be safely applied to all drill crops.

Although your committee have stated that short muck or fermented manures or composts, are a proper dressing for wheat, and for the reasons they have given, yet they do not wish to be understood as forbidding altogether the application of unfermented manures to that crop. On the contrary, they would recommend experiments, on a small scale, of stable manure, to the wheat field, in order to ascertain more precisely its nature and effects. To this they are the more induced, from having lately seen a successful experiment made with hot muck on wheat, in the fourth volume of the memoirs of the Philadelphia Agricultural Society. Comparative experiments are not sufficiently attended to, and although it is now well known, that fermented manures are proper for the wheat field, yet sufficient trials have not been made with hot muck to prove that it may not have advantages outweighing the disadvantages of introducing weed seeds, and perhaps some diseases. For weeds ought not to be dreaded so much in this country, as in others, on account of the frequency of fallow crops; and perhaps the diseases introduced by hot muck, may be attributed to the want of judgment in the farmer, in applying it in too great a quantity. If the evil or weed seeds and disease can be remedied or even abated, your committee see a great

advantage in the superior strength and quality of hot muck, as they believe that twenty cart loads of it will impart as much fertility to an acre of clay land, as forty of well rotted manure; because the former would contain nearly as much soluble matter as the latter, and of greater strength, and have besides all the grasses in them, which the rotted manure will have lost in the different stages of its decomposition.

With regard to the time of applying manures to the soil, by attending to the principles laid down in the first part of this report, we shall be enabled to decide that question with the greatest probability of successful result. As carbonic acid and ammoniacal gasses are formed during fermentation, and these are powerful agents for our purpose, it follows that these gasses should be formed in the soil, where they would immediately benefit us, and not in a manure heap, whence they would escape, in the surrounding atmosphere, and be lost. Further, as all manures must be in a state of solution before they can become the food of plants, it follows that manures should be kept dry, till applied to the soil, both to check fermentation, and the consequent escape of the gasses, and preserve their soluble parts from being dissolved and wasted in the manure heap. From these two principles, it results that hot muck should be kept in or under your stable as compost and dry as possible, or if in a manure heap, it should be well covered with earth, till you are about to plant your drill crop previously to which, it should be carted on the land, spread on the surface evenly, or scattered in drill in deep furrows, and covered with the plough without one moment's unnecessary delay. The carting and ploughing in, should be done at the same time if possible.

Vegetable composts, having an excess of fibrous and insoluble matters, should be treated differently. To break down and dissolve the woody fibre, the vegetable substance composing your compost should be laid in layers, intermixed with lime, ashes, gypsum, clay ashes, or animal dung, and water enough to commence a fermentation should be added, and when the carbonic acid begins to fly off, the heap should be well covered with earth, and kept so till wanted for your broadcast crop. The carting out, spreading and ploughing under, should be performed as expeditiously as possible, and this operation in both kinds of manure should be performed as immediately before the seeding as convenient, in order that your young plants should lose none of the benefits to be derived from them.

There are two points which present themselves here, which though not strictly belonging to this committee, they will briefly examine. One, the most advantageous mode of spreading manure, whether all over the surface, or in drill. And the other, whether all manures had not better be applied to a crop preparatory to wheat, rather than to the wheat crop itself.

When manure is to be applied to a drill crop, which is to be succeeded by one or more drill crops, your committee are of opinion that scattering the manure along the bottom of furrows, four, five, or six feet apart, is the best mode, be-

cause, one half of the quantity at least, will be sufficient, or saved for other fields. Your manure is better buried beneath the soil, and of course more secure from evaporation; the operation itself is more easy than flush ploughing under, and if three drill crops are taken, by running your drill furrows in different places each year, they will probably all be good, and your field will at last be all manured by one or two cross ploughings. Unquestionably these reasons do not apply to a broadcast crop, where the manure should be spread as regularly as possible, all over the surface, and as regularly ploughed under.

With respect to the application of any manure, immediately to a wheat crop, your committee are of opinion it ought to be avoided if possible, at least until further experiment shall test the degree of danger to be incurred from disease on weeds. One bold farmer, as above mentioned, has been successful in one attempt at raising a heavy crop of wheat with stable manure, but one fact should not be permitted, hastily, to overset the experience of years. A reasonable prudence will warn us that the greatest care will not secure our young wheat from being overrun with weeds in the spring, which will not only injure the crop, but the land afterwards; even if the grain escapes the diseases to which the immediate application of hot stable manure exposes it. In all stiff soils, it is certainly advisable to plant a drill crop, as a preparation for wheat, and apply your manure to that crop. Weeds will then be destroyed in the cultivation of this crop, and your land in the fall will be left clean, pulverized, and rich. Potatoes, beans, peas, to be cut for fodder, or any drill crop which may be removed by the last of August, would repay the farmer for his additional trouble.

Your committee will conclude at this time, with the following general rules with respect to manures, and their application, which, though they may be liable to some exceptions, they trust will prove useful.

Farm yard manures should be kept from fermenting as much as possible. This process should take place in the soil.

In composts, fermentation should be encouraged so far as to break down the woody fibre of the vegetable substances of which they are composed, so as to render them soluble, and afterwards kept dry and cool.

The time of application to the soil, should be that immediately preceding the introduction of the seed.

All which is respectfully submitted.

THOMAS PINCKNEY, JR.

Chairman.

FROM THE SCHOHARIE OBSERVER.

THE "YELLOW WATER" IN HORSES.

Symptoms.—This disease is always attended with a violent palpitation of the heart; a drooping of the head and sleepiness of the eyes; the hair of the mane and tail become loose.

Remedy.—One quarter ounce gamboge; one half ounce salt petre; one ounce alum; one ounce copperas. Pulverize all these ingredients, and put the whole into a bottle with four

gills of cold water; stop it tight, shake it well, and let it stand one night; it is then fit for use.

Application.—Give one table spoonful of the mixture three mornings running, then omitting three mornings, repeat the dose as before, and so on until the horse has taken nine doses. A cowel is to be made in the breast as soon as the use of the medicine commences, turning it once a day.

Working the horse or bleeding him within three months is forbidden.

The subscriber has cured many horses in the last stage of this disease, and never lost one—he is now old and infirm, and wishes the cure made known for the public good—and as this disease is very prevalent and mortal among horses, it will be unnecessary to suggest the propriety to editors of public newspapers, to give it publicity for their customers.

DAVID WILEY.

Schoharie, June 27, 1821.

Messrs. Strickland and Baldwin, the engineers, left this city, on Monday last, with several others engaged in the work, to commence operation on the Union Canal, which is to unite the waters of the Susquehanna and the Schuylkill.

Potatoes.—The best mode of preserving potatoes, is to pack them in casks when digging them from the ground, and filling the interstices, as they are put into the casks with sand. The cask will hold as many potatoes as it would without sand; by this means the air is sufficiently excluded, which is very injurious to the potatoes, as the light of the sun; they cannot be too soon secured from both. Hundreds of barrels taken to the West Indies, on arrival had preserved their flavour and sweetness as good as when they first came out of the ground, and they were not in the slightest degree affected by the close air of the ship.

THE FARMER.

BALTIMORE, FRIDAY, OCTOBER 12, 1821.

☞ To the article on "the horse and plough" we had prepared one on the wagon, with some engravings to illustrate the proper mode of gearing with a view to the most advantageous use of horse power—for want of room these views have been postponed.

☞ We shall venture on the publication of the proceedings of another Agricultural festival at Holkham—These proceedings cast light on the political rights of agriculture—they bring into view new modes and objects of culture—they display the enterprise and noble hospitality of Mr. Coke. Let his example serve as a reproach to the wealthy and ambitious of other countries, who have the means and the intelligence without the spirit and the liberality to follow his example, on any even the smallest scale.

☞ On reading again the valuable papers from Commodore Porter, on the preservation of timber, we discover an error of the Printer in copying the words "tu Brute"—a small b is used instead of the capital B—This would be a ludicrous mistake if it were not counteracted; first by the well known Latin exclamation of Caesar, who, on discovering Brutus amongst his assailants cries out in surprise and despair "et tu Brute?" Again the words as printed with a small b, if taken as French words—would signify thou brute—now no one at all acquainted, and there are few Americans who are not, with the professional life and predilections of Com. Porter could ever suspect him of

speaking disparagingly of the French nation—we know enough of his sentiments to affirm that no man can entertain for it a higher respect than he does—still he would repel injurious insinuations from any quarter. Thus it is that in the case referred to he says that animadversions have latterly been made by the French minister of Marine, with a view of exalting the character of his naval administration at the expense of ours—"The same (says he) has been done in England—let this pass—But (of the French) et tu Brute?"—The error committed in the Farmer was corrected in the Washington City Gazette where the numbers were copied. We should not have taken the trouble to make these corrections if we were not certain that the observations of the Commodore in relation to the regulations of the French and English naval service would attract attention "across the waters" where great vigilance is at present exercised in all things connected with that branch of their forces.

PRICES CURRENT.

Flour from the wagons, \$5 37½ to \$6—Whiskey from do. 30 cts. exclusive of bbl—Wheat, white, \$1 12 to 1 18—Red, do. \$1 10 a \$1 13—Corn, 53 to 54 cents—Rye, 60 cents—Oats, 33 cents—Barley, 60 a 65 cts—Hay, pr ton 12 a \$14—Straw do. \$8—Live Cattle, \$5 a 6 50—Codfish, per quintal, wholesale, \$3, retail 3 50 a \$4—N. E. Beans pr bushel \$1 12½—do. Peas, 75 cts—Prime Beef, \$9—Prime Pork, \$10 a 11—Mess, \$15—Plaster in stone \$6 pr ton—do, ground, \$1 37½ pr barrel, 33 cts. per bushel, \$8 per ton—Americas White Lead, \$12 50—Ground Alum do 55 a 60—St Ubes, 60—Cadiz, 50 a 55—Turk's Island, 75—Beef, prime ps. 8 a 10 cts—Hams, 10 a 12 cts—Middlings, 10 cts—Butter, 25 cents—Eggs, 12½ cts. per dozen—Cheese, 8 a 10 cts per pound.

NORTH-CAROLINA STAPLES.—Tar \$1 75, cargo price, plenty—Turpentine, soft, \$1 75 a 1 87 do—Hard, \$1 25 a 1 37—Spirits Turpentine, 30 cents—Varnish, nominally, 25 cents, no sales—Rosin, \$1 25, nominally, no demand—Pitch scarce, \$2 25—Cotton, upland, 15 a 18 cents—Louisiana, 16 a 20—Alabama, 14 a 16 cents.

MARYLAND TOBACCO—4 hds Patuxent, sold the present week for \$6 50—1 do. dp. bright red, \$10—Several hds wagon, at 10 to \$12.

No Sales Virginia.

Hotchkiss' Patent & Improved Straw Cutter.

These machines have the ascendancy over every other machine heretofore invented, for chaffing any & every kind of long forage. The improvements have been made at great expense, and by long experience.—The subscriber has several of them on hand now ready for sale, which he thinks would give satisfaction to the purchasers—Price only \$55, or including an extra knife—his shop is over Isaac Hayward's flower store in Market street, between Eutaw street and Cugle's Tavern.

JONATHAN S. EASTMAN.

Baltimore, Oct. 12th, 1821.

An Alderney Bull.

The Editor has for sale on his Stock Farm, a full blood Alderney Bull, calved in April last. He is very well grown, docile, and feeds kindly. The dam of this calf was imported and was mentioned in this paper by the Editor, as remarkable for the richness of her milk before he purchased her. The price will be \$80.

☞ For sale also, the fine Maltese Jack Sancho. He is 5 years old and the Editor believes he can conscientiously recommend him as the largest and finest covering Jack in America. It is found by experience that near to large cities where few colts are bred, there is not sufficient encouragement for Jacks or Stallions.

PUBLISHED BY JOHN S. SKINNER.